

the mornings of the 16th and 17th that temperatures of 28° to 30° would occur the following nights. The temperatures predicted were verified to the exact degree except at two substations on the morning of the 18th, where the temperature reached 26°. On the morning of the 23d the barometer was decidedly below the normal in Utah and the Rocky Mountain region. Warnings of stormy weather and freezing temperature were issued for western Utah. The temperature fell 10° to 34° within 24 hours and ranged from 14° to 32° in western Utah. On the morning of the 24th the barometer was still abnormally low in the central and eastern parts of the district and warnings of temperatures below the freezing point were issued for the fruit valleys of western Colorado and northwest New Mexico. The temperatures in the fruit valleys ranged from 22° to 30° the following morning. Warnings of freezing temperature or heavy frost were also issued for the fruit valleys on the mornings of the 25th, 26th, and 27th and were verified.—*Frederick W. Brist.*

SAN FRANCISCO FORECAST DISTRICT.

The month of April, 1921, in this district was marked by frequent and rapid changes in both weather and temperature. The storm movement was rapid and storms moving inland from the north Pacific entered the continent at a high latitude. Most of the storms after reaching

British Columbia or Alberta moved southward between the Cascade-Sierra Nevada and Rocky Mountains to southern Nevada and Arizona and thence eastward. Very little rain fell in this district during the first part of the month, but in the latter part frequent rains occurred in the north Pacific States, while practically drought conditions continued in California and Nevada.

Storm warnings were ordered eight times and small-craft warnings three times, and were generally verified.

Live-stock warnings were issued for eastern Washington, eastern Oregon, Idaho, and Nevada nine times. It is believed that these warnings were entirely justified.

Warnings for heavy or killing frosts were issued four times for California, nine times for Washington, Oregon, Idaho, and Nevada and were generally verified.

On the morning of the 9th a forecast was sent to the official in charge at Spokane, Wash., for distribution to the orchardists in that section, reading "weather for the next two days favorable for spraying." This was the first attempt to make a forecast of this character for that district and it was fully verified.

A warm wave spread over California from the 26th to the 29th, reaching its crest on the 28th, when afternoon temperatures at many places reached within a few degrees of the highest previous April record.—*G. H. Willson.*